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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,536	10/31/2003	Matthew W. Dunn	25253-US-CIP	2700
22889	7590	12/10/2009		
OWENS CORNING 2790 COLUMBUS ROAD GRANVILLE, OH 43023			EXAMINER WORRELL JR, LARRY D	
			ART UNIT	PAPER NUMBER
			3765	
			NOTIFICATION DATE	DELIVERY MODE
			12/10/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USIPDEPT@owenscorning.com

Office Action Summary

Application No.

10/699,536

Applicant(s)

DUNN ET AL.

Examiner

Danny Worrell

Art Unit

3765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saarikettu (5,149,583) in view of Vane (5,445,693).

As seen in the embodiment of figure 3, the disclosure of Saarikettu (5,149,583) teaches the fabric as claimed including a plurality of substantially parallel aligned fiber elements (1) with every parallel aligned fiber element arranged in one of a plurality of fiber element groups, each of said fiber element groups having one or more fiber elements (1) wherein a portion of said groups contain two or more fiber elements (three), and wherein the spacing between fiber elements within a element group is less than the spacing between adjacent element groups. However, the fiber elements of Saarikettu (5,149,583) are set forth as threads rather than tows. Vane teaches a reinforcing fabric which is formed from tows, yarns or threads. One of ordinary skill in the art is aware that fiber tows are drafted and/or spun to form yarns. It would have been obvious at the time the invention was made to one of ordinary skill in the art to provide the threads of Saarikettu (5,149,583) as tows as shown by Vane in order to provide bundles of parallel monofilaments which would eliminate the yarn forming step, i.e. spinning. Re claim 3, note the odd number of tows (three). Re claim 5, the distance between the tow groups is capable of acting as a flow channel. Concerning the spacing between the tows, it would have been

obvious at the time the invention was made to provide the tows with a specific spacing in order to find the spacing that brings about the optimal fabric strength. Concerning the use of additional layers to form a biaxial, triaxial or quadaxial fabric. One of ordinary skill in the art is aware that additional layers provide additional reinforcement, strength, flexibility, thickness, stiffness etc. Vane teaches the use of additional layers of tow elements to form biaxial, triaxial and quadaxial reinforcement fabrics. It would have been obvious to provide additional layers for a biaxial, triaxial and quadaxial fabric in order to optimize strength, flexibility, thickness, stiffness etc. Re claims 6 and 18, note that the tows are stitches together via knit stitches.

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Worrell whose telephone number is 571/272-4997. The examiner can normally be reached on MONDAY-THURSDAY.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, GARY WELCH can be reached on 571/272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Danny Worrell/
Primary Examiner, Art Unit 3765

LDW